Complete Summary

GUIDELINE TITLE

Complex regional pain syndrome (CRPS).

BIBLIOGRAPHIC SOURCE(S)

Washington State Department of Labor and Industries. Complex regional pain syndrome (CRPS). Olympia (WA): Washington State Department of Labor and Industries; 2002 Aug. 9 p. [2 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Complex regional pain syndrome (CRPS), formerly known as reflex sympathetic dystrophy (CRPS type I and CRPS type II)

GUIDELINE CATEGORY

Diagnosis
Evaluation
Treatment

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Neurology
Orthopedic Surgery
Physical Medicine and Rehabilitation
Psychiatry
Psychology

INTENDED USERS

Health Care Providers
Health Plans
Occupational Therapists
Physical Therapists
Physicians
Psychologists/Non-physician Behavioral Health Clinicians
Utilization Management

GUIDELINE OBJECTIVE(S)

To provide guidelines for diagnosing and treating complex regional pain syndrome (CRPS)

TARGET POPULATION

The injured worker with complex regional pain syndrome (CRPS)

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis

1. History and physical examination
2. Three-phase bone scan

Treatment

1. Physical or occupational therapy to restore function
2. Sympathetic blocks or medications to control pain
3. Psychological treatment
4. Hospitalization
5. Sympathectomy (Note: sympathectomy is specifically not indicated for complex regional pain syndrome)

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline developer performed literature searches of the U.S. National Library of Medicine's Medline to identify data related to the injured worker population.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Consensus development has generally taken place between the permanent members of the subcommittee (orthopedic surgeon, physiatrist, occupational medicine physician, neurologist, neurosurgeon) and ad hoc invited physicians who are clinical experts in the topic to be addressed. One hallmark of this discussion is that, since few of the guidelines being discussed have a scientific basis, disagreement on specific points is common. Following the initial meeting on each guideline, subsequent meetings are only attended by permanent members unless information gathering from invited physicians is not complete.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Following input from community-based practicing physicians, the guideline was further refined.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

I. What is Complex Regional Pain Syndrome (CRPS)?

Complex regional pain syndromes are painful conditions that usually affect the distal part of an upper or lower extremity and are associated with characteristic clinical phenomena (see Table 1 below). There are two subtypes -- CRPS Type I and CRPS Type II.

The term "complex regional pain syndrome" was introduced to replace the term "reflex sympathetic dystrophy." CRPS Type I used to be called reflex sympathetic dystrophy. CRPS Type II used to be called causalgia. The terminology was changed because the pathophysiology of CRPS is not known with certainty. It was determined that a descriptive term such as CRPS was preferable to "reflex sympathetic dystrophy" which carries with it the assumption that the sympathetic nervous system is important in the pathophysiology of the painful condition.

The terms CRPS Type I and CRPS Type II are meant as descriptors of certain chronic pain syndromes. They do not embody any assumptions about pathophysiology. For the most part the clinical phenomena characteristics of CRPS Type I are the same as seen in CRPS Type II. The central difference between Type I and Type II is that, by definition, Type II occurs following a known peripheral nerve injury, whereas Type I occurs in the absence of any known nerve injury.

Pain that can be abolished or greatly reduced by sympathetic blockade (for example, a stellate ganglion block) is called sympathetically maintained pain. Pain that is not affected by sympathetic blockade is called sympathetically independent pain. The pain in some CRPS patients is sympathetically maintained; in others, the pain is sympathetically independent. The relation between CRPS and sympathetically maintained pain can be seen in the Venn diagram in the original guideline document.

If a physician believes the CRPS condition is related to an accepted occupational injury, written documentation of the relationship (on a more probable than not basis) to the original condition should be provided. Treatment for CRPS will only be authorized if the relationship to an accepted injury is established.

II. Diagnostic Codes

See the original guideline document for a list of relevant International Classification of Diseases, 9th edition (ICD-9) codes.

III. Key Issues in Making a Diagnosis

A. CRPS is a syndrome - patient's symptoms and signs match criteria described in Table 1.

B. CRPS is Uncommon - Most patients with widespread pain in an extremity do NOT have CRPS. Avoid the mistake of diagnosing CRPS primarily because a patient has widespread extremity pain that does not fit an obvious anatomic pattern. In many instances, there is no diagnostic label that adequately describes the patient's clinical findings. It is often more appropriate to describe a patient as having "regional pain of undetermined origin" than to diagnose CRPS.

C. Is CRPS a Disease? - Many clinicians believe that CRPS can best be construed as a "reaction pattern" to injury or to excessive activity restrictions (including immobilization) following injury. From this perspective, CRPS may be a complication of an injury or be iatrogenically induced, but it is not an independent disease process.

D. Type I CRPS vs. Type II CRPS - In a patient with clinical findings of CRPS, the distinction between Type I and Type II CRPS depends on the physician's assessment of the nature of the injury underlying the CRPS. In many situations, the distinction is obvious - if CRPS onsets following an ankle sprain or a fracture of the hand, it is Type I CRPS. If CRPS onsets following a gunshot wound that severely injures the median nerve, it is Type II CRPS. In ambiguous situations (for example, CRPS in the context of a possible lumbar radiculopathy), the physician should be conservative in diagnosing Type II CRPS. This diagnosis should be made only when there is a known nerve injury with definable loss of sensory and/or motor function.

IV. Typical Clinical Findings

See Table 1 below.

V. An Overview of Treatment

Details regarding treatment are presented in Tables 1 and 2 below.

Table 1. Labor and Industries Criteria Number 13. Chronic Regional Pain Syndrome (CRPS) Conservative Treatment Guideline

EXAMINATION FINDINGS AND DIAGNOSTIC TEST RESULTS	CONSERVATIVE CARE
At least four of the following must be present in order for a diagnosis of CRPS to be made.	Early aggressive care is encouraged. Emphasis should be on improved functioning of the symptomatic limb.

EXAMINATION FINDINGS AND DIAGNOSTIC TEST RESULTS	CONSERVATIVE CARE
<u>EXAMINATION FINDINGS</u> 1. Temperature/color change 2. Edema 3. Trophic skin, hair, nail growth abnormalities 4. Impaired motor function 5. Hyperpathia/allodynia 6. Sudomotor changes <u>DIAGNOSTIC TEST RESULTS</u> 7. Three phase bone scan that is abnormal in pattern characteristics for CRPS. This test is not needed if 4 or more of the above examination findings are present.	<u>FIRST SIX WEEKS OF CARE:</u> • Sympathetic blocks, maximum of five. Each block should be followed immediately by physical/occupational therapy. • Physical/occupational therapy should be focused on increasing functional level (see Table 2). • Other treatment (e.g., medication at MD's discretion) as long as it promotes improved function. <u>AFTER THE 1ST SIX WEEKS OF CARE:</u> • Strongly consider psychiatric or psychological consultation if disability has extended beyond 3 months • Continued physical/occupational therapy based on documented progress towards goals established during first 6 weeks (referenced above). • Sympathetic blocks only if response to previous blocks has been positive, maximum of 3** every six weeks for a maximum of 12 weeks.
SURGICAL INTERVENTIONS (SYMPATHETECTOMY) FOR TREATMENT OF THIS CONDITION IS <u>NOT COVERED</u>	**A maximum of 11 blocks can be delivered over the total 18 week period

Table 2. Protocol for Physical Therapy/Occupational Therapy for CRPS

1. Evaluation should:
    A. Include a date of onset of original injury (helpful in determining if early or late stage) and a date of onset of the CRPS symptoms.
    B. Establish a baseline for strength and motion.
    C. Establish a baseline for weight bearing for lower extremity.
    D. If lower extremity, evaluate distance able to walk and need for assistive device.
    E. If upper extremity, establish a baseline for grip strength, pinch strength, and shoulder range of motion.
    F. If possible, objectify swelling (e.g., do volume displacements).
    G. Define functional limitations.
2. Set specific functional goals for treatment related to affected extremity.
3. All treatment programs should include a core of:
    A. A progressive active exercise program, including a monitored home exercise program
    B. Progressive weight bearing for the lower extremity (if involved)
    C. Progressive improvement of grip strength, pinch strength, and shoulder range of motion of the upper extremity (if involved)
    D. A desensitization program
4. For specific cases, additional treatment options may be indicated to enhance effectiveness of the above core elements. Documentation should reflect reasons for these additional treatment options.
5. Documentation should include:
    A. At least every two weeks, assessment of progress toward goals
    B. Response to treatment used in addition to core elements (listed above in section 3)
    C. Evidence of motivation and participation in home exercise program (i.e., diary or quota system)

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

The recommendations were developed by combining pertinent evidence from the medical literature with the opinions of clinical expert consultants and community-based practicing physicians. Because of a paucity of specific evidence related to the injured worker population, the guideline is more heavily based on expert opinion.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Physical restoration and pain control for chronic regional pain syndrome (CRPS) through conservative treatment and physical therapy/occupational therapy

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- The Office of the Medical Director works closely with the provider community to develop medical treatment guidelines on a wide range of topics relevant to injured workers. Guidelines cover areas such as lumbar fusion, indications for lumbar magnetic resonance imaging (MRI), and the prescribing of controlled substances. Although doctors are expected to be familiar with the guidelines and follow the recommendations, the department also understands that guidelines are not hard-and-fast rules. Good medical judgment is important in deciding how to use and interpret this information.
- The guideline is meant to be a gold standard for the majority of requests, but for the minority of workers who appear to fall outside of the guideline and whose complexity of clinical findings exceeds the specificity of the guideline, a further review by a specialty-matched physician is conducted.
- The guideline-setting process will be iterative; that is, although initial guidelines may be quite liberally constructed, subsequent tightening of the guideline would occur as other national guidelines are set, or other scientific evidence (e.g., from outcomes research) becomes available. This iterative process stands in contrast to the method in some states of placing guidelines in regulation. Although such regulation could aid in the dissemination and quality oversight of guidelines, flexibility in creating updated guidelines might be limited.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

All of the surgical guidelines established by the Department of Labor and Industries in collaboration with the Washington State Medical Association (WSMA) have been implemented in the context of the Utilization Review (UR) program (complete details regarding the Utilization Review program can be found on the Washington State Department of Labor and Industries Web site). It has been critical in contract negotiations with UR vendors to specify that the vendor is willing to substitute WSMA-generated guidelines for less specific standards already in use by the company. The Department of Labor and Industries initiated an outpatient UR program, and this has allowed full implementation of guidelines related to outpatient procedures (e.g., carpal tunnel surgery, magnetic resonance imagings [MRIs]). The scheduled drug use guideline has been used internally, but has not been formally implemented in a UR program.

The intention of the joint Department of Labor and Industries and WSMA Medical Guidelines Subcommittee was to develop treatment guidelines that would be

implemented in a nonadversarial way. The subcommittee tried to distinguish between clear-cut indications for procedures and indications that were questionable. The expectation was that when surgery was requested for a patient with clear-cut indications, the request would be approved by nurse reviewers. However, if such clear-cut indications were not present, the request would not be automatically denied. Instead, it would be referred to a physician consultant who would review the patient's file, discuss the case with the requesting surgeon, and make recommendations to the claims manager.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Washington State Department of Labor and Industries. Complex regional pain syndrome (CRPS). Olympia (WA): Washington State Department of Labor and Industries; 2002 Aug. 9 p. [2 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1997 Jun (revised 1999 Jun; republished 2002 Aug)

GUIDELINE DEVELOPER(S)

Washington State Department of Labor and Industries - State/Local Government Agency [U.S.]
Washington State Occupational Therapy Association - Professional Association
Washington State Physical Therapy Association - Professional Association

SOURCE(S) OF FUNDING

Washington State Department of Labor and Industries

GUIDELINE COMMITTEE

Washington State Department of Labor and Industries (L&I), Washington State Medical Association (WSMA) Industrial Insurance Advisory Section of the Interspecialty Council

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Medical Director, Washington State Department of Labor and Industries (L&I): Gary Franklin, MD

The individual names of the Washington State Medical Association (WSMA) Industrial Insurance Advisory Committee are not provided in the original guideline document.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Washington State Department of Labor and Industries. Complex regional pain syndrome (CRPS). Olympia (WA): Washington State Department of Labor and Industries; 1999 Jun.

GUIDELINE AVAILABILITY

Electronic copies: Available from the Washington State Department of Labor and Industries Web site.

Print copies: L&I Warehouse, Department of Labor and Industries, P.O. Box 44843, Olympia, Washington 98504-4843.

AVAILABILITY OF COMPANION DOCUMENTS

This guideline is one of 16 guidelines published in the following monograph:

- Medical treatment guidelines. Olympia (WA): Washington State Department of Labor and Industries, 2002 Aug. 109 p.

Also included in this monograph:

- Grannemann TW (editor). Review, regulate, or reform? What works to control workers' compensation medical costs? In: Medical treatment guidelines. Olympia (WA): Washington State Department of Labor and Industries, 1994 (republished 2002). p. 3-19.

Electronic copies: Available from the Washington State Department of Labor and Industries Web site.

The following is also available:

- Washington State Department of Labor and Industries. Utilization Review Program. New UR Firm. (Provider Bulletin: PB 02-04). Olympia (WA): Washington State Department of Labor and Industries; 2002 Apr. 12 p.

Print copies are available from the L&I Warehouse, Department of Labor and Industries, P.O. Box 44843, Olympia, Washington 98504-4843.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on July 24, 1999. The information was verified by the guideline developer on October 17, 1999. This summary was updated by ECRI on May 28, 2004. The information was verified by the guideline developer on June 14, 2004.

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